

### **REMARKS**

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-41 are all the claims currently pending in the application. Claims 7-14, 19-24 and 26-39 have been withdrawn from consideration. Claims 1-6, 15-18, 25, 40, and 41 are all the claims currently under examination. In response to the Office Action, Applicant respectfully submits that the claims define patentable subject matter.

#### **I. Overview of the Office Action**

Claims 1, 2, 15, 16, 25, 40, and 41 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *previously cited* Mohri (U.S. Patent Application Publication No. 2002/0012014) in view of newly cited Fukumoto et al. (U.S. Patent No. 6,380,923, hereafter “Fukumoto”).

Claims 3-6, 17, and 18 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mohri in view of Fukumoto and further in view of Rafii et al. (U.S. Patent No. 6,512,838, hereafter “Rafii”).

Applicant respectfully traverses the rejections.

#### **II. Claim Rejections**

Applicant respectfully submits that independent claim 1 and analogous independent claim 15 are patentable because the cited references, alone or in combination, do not teach or suggest all of the features of the claims.

Independent claim 1 recites in part:

obtaining movement signals output from each of the finger devices and recognizing finger positions of the finger device representing positions of fingers by which the finger device are worn; and

adaptively configuring the 3D input device corresponding to signals which are provided from the plurality of the finger devices worn by a user, by using information of the recognized finger positions of the finger device;

wherein the adaptively configuring the 3D input device comprises determining the number of fingers on which the plurality of devices are worn and assigning differing configurations to the input device based on the number of fingers which are wearing a finger device; and

wherein the result of the input operation is determined by a combination of the finger positions and the assigned configuration of the input device. obtaining movement signals output from each of the finger devices and recognizing finger positions of the finger device representing positions of fingers by which the finger device are worn; and

adaptively configuring the 3D input device corresponding to signals which are provided from the plurality of the finger devices worn by a user, by using information of the recognized finger positions of the finger device;

wherein the adaptively configuring the 3D input device comprises determining the number of fingers on which the plurality of devices are worn and assigning differing configurations to the input device based on the number of fingers which are wearing a finger device; and

wherein the result of the input operation is determined by a combination of the finger positions and the assigned configuration of the input device.

The Examiner concedes that Mohri does not teach or suggest “the adaptively configuring the 3D input device comprises determining the number of fingers on which the plurality of devices are worn and assigning differing configurations to the input device based on the number of fingers which are wearing a finger device; and wherein the result of the input operation is determined by a combination of the finger positions and the assigned configuration of the input device,” as recited in claim 1 and analogously recited in independent claim 15. The Examiner

thus relies on Fukumoto to allegedly remedy this deficiency of Mohri. Applicant respectfully disagrees with the Examiner.

First, Applicant respectfully submits that there is no teaching or suggestion in Fukumoto of “adaptively **configuring** the **3D input device**”, as claimed. Applicant notes that the Examiner has not addressed this feature of the claim with regard to the Fukumoto reference<sup>2</sup>. Nevertheless, Fukumoto does not appear to be concerned with the configuration of a 3D information input device, as claimed. Fukumoto merely detects a shock generated when fingertips, which comprise wearable input device devices, strike a surface, and determines input information based on the detected strike. Fukumoto does not **configure** a three-dimensional device.

Further, Applicant respectfully submits that there is no teaching or suggestion in Fukumoto of “**determining** the number of fingers on which the plurality of devices are worn”, as recited in independent claim 1 and analogously recited in independent claim 15.

According to an exemplary embodiment, after a finger device self-configuring unit 141 of the signal processing unit 140 receives finger device recognition information and sensor signals from the pre-processing unit 130, the finger device self-configuring unit 141 deactivates algorithms on unworn sensors and configures the firmware subsequently based on the received finger device recognition information. For example, if the finger device self-configuring unit 141 receives finger device recognition information indicating the user is wearing three sensors - the second sensor 112, the third sensor 113, and the fourth sensor 114, the finger device self-configuring unit 141 sets up algorithms used to process the signals received from the second 112,

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<sup>2</sup> The Office Action dated November 23, 2010 at page 3.

third 113, and fourth 114 sensors and deactivates the other algorithms (see for example, page 10, line 21 to page 11, line 22 of the specification).

The Examiner cites FIG. 1 of Fukumoto (which depicts one hand which comprises five sensors), and FIG. 37 of Fukumoto (which depicts two hands which comprise six sensors).

However, the depiction in FIG. 37 of Fukumoto is simply a different embodiment which places six sensors on both hands to allow sight impaired users to utilize the Braille system. Fukumoto does not teach or suggest that a determination is made that six sensors are on the fingers, and assigning differing configurations to the input device based on the number of fingers which are wearing a finger device, as claimed.

Additionally, Applicant respectfully submits that with regard to the depiction in FIG. 1 of Fukumoto, there is no teaching or suggestion in Fukumoto that a determination is made of the number of fingers on which the plurality of devices are worn, as claimed.

Further, Applicant respectfully submits that there is no teaching or suggestion in Fukumoto of “assigning differing configurations to the input device based on the number of fingers which are wearing a finger device,” as recited in independent claim 1 and analogously recited in independent claim 15.

In alleged support of the rejection, the Examiner merely states that “FIG. 2 configuration is differed (sic) from FIG. 38).<sup>3</sup> However, the Examiner has not articulated how the claimed “input device” allegedly reads on the teachings of Fukumoto.

Even assuming *arguendo* that the claimed “input device” corresponds to the PC in FIG. 38 (which Applicant submits it does not), there is no teaching or suggestion in Fukumoto that a

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<sup>3</sup> The Office Action dated November 23, 2010 at page 3.

configuration of the PC in FIG. 38 of Fukumoto and the processing apparatus HH in FIG. 2 of Fukumoto are different “based on the number of fingers which are wearing a finger device”, as claimed. In fact, Fukumoto teaches that the input device as depicted in FIG. 38 of Fukumoto may employ the same wearable input device as depicted in FIG 2 (see column 22, lines 50-54), thus clearly undermining the Examiner’s position.

Finally, Applicant respectfully submits that there is no teaching or suggestion in Fukumoto that “the result of the input operation is determined by a combination of the finger positions and the assigned configuration of the input device”, as recited in independent claim 1 and analogously recited in independent claim 15.

The Examiner simply cites FIG. 36 of Fukumoto as allegedly teaching this feature of the claims. However, FIG. 36 of Fukumoto simply teaches an example of a fingering table which is determined based on absolute specific actions (the pressing of the fingers) and relative specific actions (the position of the pressed fingers).

Applicant respectfully submits that there is simply no teaching or suggestion in Fukumoto that “the result of the input operation is determined by a combination of the finger positions and the assigned configuration of the input device”, as claimed.

Further, Rafii does not make up for the above-noted deficiencies of Mohri and Fukumoto.

Accordingly, Applicant respectfully submits that independent claims 1 and 15 should be allowable because the cited references, alone or in combination, do not teach or suggest all of the features of the claims. Claims 2-6, 16-18, 25, 40, and 41 should also be allowable at least by virtue of their dependency on independent claims 1 and 15.

### III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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